R E P O R T R E S U M E S

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GAMBITS, EDUCATIONAL INNOVATIONS IN SAN MATEO COUNTY.

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SAN MATEO COUNTY PACE PROGRAM, REDWOOD CITY,CALIF.

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DESCRIBED ARE 12 INNOVATIVE PACE PROJECTS IN SAN MATEO COUNTY, CALIFORNIA, WHICH WERE DEVELOPED WITH ELEMENTARY AND SECONDARY EDUCATION ACT TITLE III FUNDS. AMONG THE PROJECTS ARE--A PRESCHOOL CENTER, AN INDUSTRIAL ARTS PROGRAM, AN ELEMENTARY SCHOOL MUSIC PROGRAM, AND ADULT JOB TRAINING. OTHERS ARE--AN IDENTIFICATION AND INTERVENTION PROJECT FOR EMOTIONALLY DISTURBED CHILDREN AND FAMILIES, UPWARD BOUND SUMMER PROGRAMS, AN ELEMENTARY SCHOOL PROJECT USING MULTIMEDIA AUDIOVISUAL MATERIALS, AND AN EDUCATIONAL RESOURCES CENTER. ONE PROJECT HAS ESTABLISHED A MONTESSORI PRESCHOOL. THERE IS ALSO A PROGRAM EMPHASIZING COMPUTER ASSISTED INSTRUCTION AND ONE TO ENHANCE STUDENT SELF-IMAGE. (NH)

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GAMBITS

EDUCATIONAL INNOVATIONS IN SAN MATEO COUNTY

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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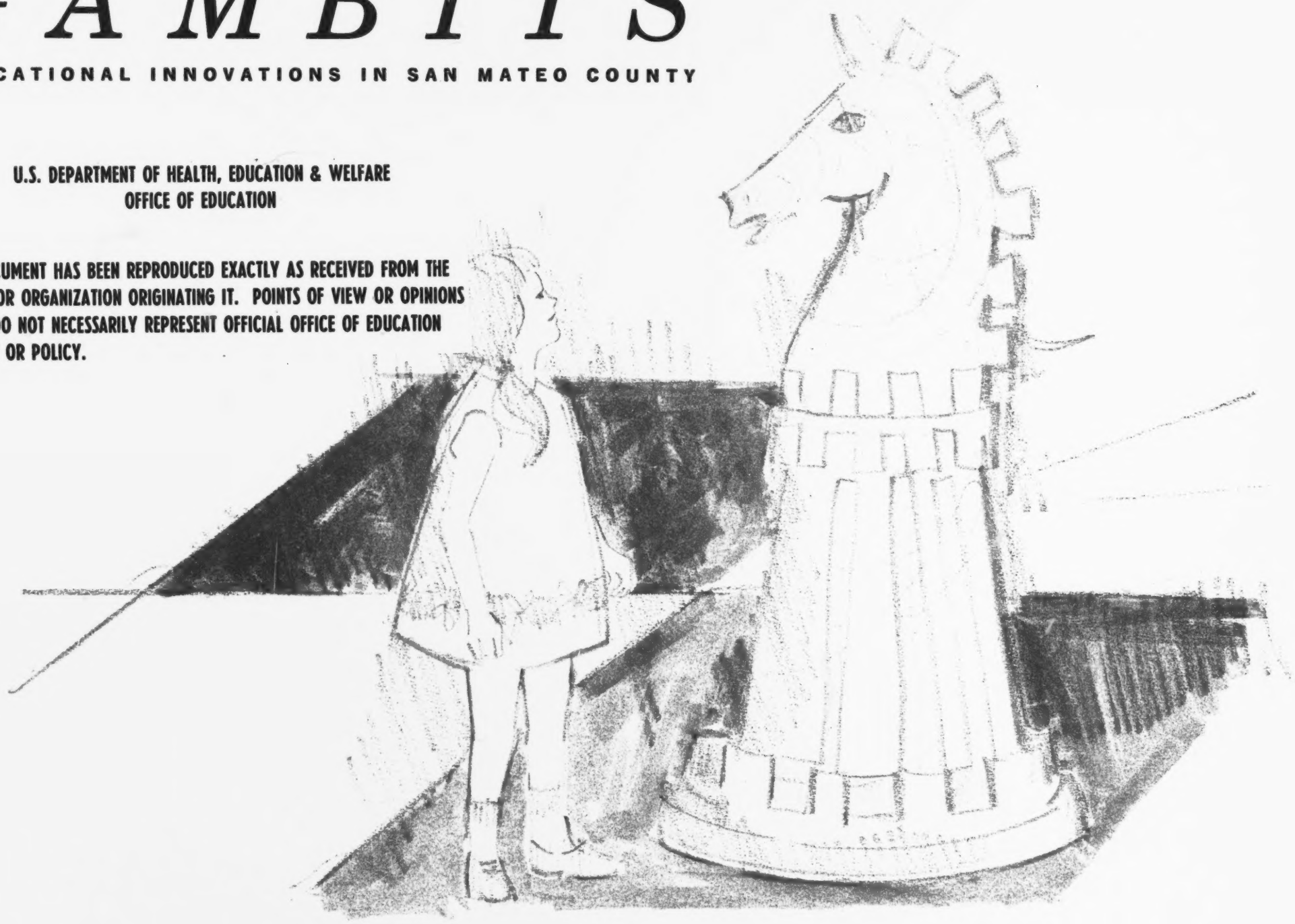

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INTRODUCTION

The following pages contain a description of twelve outstanding educational projects in the San Mateo County area. Some of these experiments are public school projects, some are conducted by private institutions, and some represent a cooperative effort between the two sectors. The range of clientele served by these projects extends from preschool through the traditional grades (kindergarten through twelfth grade) to an activity designed for adults.

Financial resources to operate the projects originate from several sources: local property taxes, state and federal funds, and private sources, both industrial and university. The common denominator of the twelve experiments is that each is an attempt to improve upon an existing educational method or is a fresh approach to an old problem. At PACE we would describe these projects as exemplary and innovative.

We selected from many exciting ventures and regretably

could not include many more in this publication. Our primary intention is to encourage educators in San Mateo County as they continue to look for ways to improve the instructional systems. In the future we will augment this publication with bulletins which we invite the reader to place in the pocket provided at the end of this booklet. In this way, the document becomes viable.

The heterogeneity of the projects in this brochure parallels the milieu of the County, which includes the affluent and the deprived, the child and the adult, the church-affiliated and the secular, and the person needing basic skills as well as the one ready for enrichment. These dynamic projects were all in operation as this booklet was being printed in the fall of 1966, and it is the hope of the San Mateo County PACE Center staff that the reader will find one or more projects to be stimulating enough to want to visit them. (The names of persons to contact are found inside the back cover.)

H.G.R.

THE SAN MATEO COUNTY PACE PROGRAM

The Elementary and Secondary Education Act of 1965 constitutes the greatest commitment ever of the Federal Government in the improvement of elementary and secondary school education. Title III, one of the law's five titles, encourages school districts to enrich their educational programs by concentrating on improving the quality of education. This effort is known as Projects to Advance Creativity in Education (PACE). Each state has been left to its own devices in determining the administrative framework for coordinating these local thrusts toward excellence. California has established twenty-one PACE centers to assist school districts in realizing the potential of PACE. These centers will act as the planning and evaluation center for pilot projects operating with funds from Title III of the Elementary and Secondary Education Act.

PACE is a structurally unique arrangement between local, state, and Federal agencies. The role of the local system is obviously crucial, for all accepted projects must originate and be sustained at the local level. The state offers its approbation and the Federal Government its financial resources. The principal restriction of the Federal Government is in its insistence that its allocations cannot be used to finance activities which the school system has, or should have, financed itself. The emphasis in Title III is on encouraging the schools to attempt new teaching methods, new organizational structures, and new counseling methods which could not be supported by local revenues. The Elementary and Secondary Education Act may subsidize both projects that are totally formulated and those in which planning is needed to bring the concept up to the implementation stage. Gradual assumption of the costs of those projects which are deemed successful by the local agency is encouraged, since Federal funding is limited to a maximum of three years.

The Executive Director of the San Mateo County PACE Program is Dr. H. Gerard Rowe, Jr. He is aided in the PACE Center by two assistant directors, David E. Rawnsley and William A. Schmick, and by the staff consultant, Mrs. James G. Hart. The Program and Center operate within the guidelines established by a board of nine directors who represent a cross section of geographical and professional elements of the County, under the authority granted by the County Board of Education.

The two major projects operating under the aegis of the San Mateo County PACE Program are the Know and Care Center Project in San Mateo and the PACE I.D. Center Project in South San Francisco. (Each is described elsewhere in this brochure.) Project SEE in Menlo Park is linked to Santa Clara County PACE Center. The Industrial Arts Center Complex in Daly City has received partial assistance under Title III, ESEA.

In order to ascertain the areas in which the greatest need for future educational development exists, the PACE Center has conducted a County-wide survey of various groups, including businessmen, educators, administrators, clergymen, housewives, and students. The results of this survey are presently being analyzed.

PACE is the fulfillment of President Johnson's reminder that "our schools also need to learn." The success of the San Mateo County PACE Program is not, however, a measure of the comparative "neediness" of the County schools. To the contrary, the high reputation of San Mateo County schools and the apparent promise of local Title III proposals have been instrumental in securing Federal allocations to these projects in the past year. The Government's policy is to satisfy the needs of all schools by assisting the innovative projects most likely to succeed and most likely, therefore, to provide insights for all school districts.

The officers of PACE emphasize that their agency is as local as are the local school districts. Success of the program depends on the willingness of the entire County to accept PACE as an extra arm in the area of educational change, and to participate in and support those projects which are selected by PACE as being most deserving of experimentation.

RAVENSWOOD CHILDREN'S CENTER

A preschool children's center staff has a physically and emotionally exhausting assignment. Every moment is a potential crisis as the tots try to adjust to long days away from home and maintain their balance among their equally immature peers. The Ravenswood Children's Center has these problems and many others, but the director, Leland Swenson, and his staff try to give a rich and positive experience to every child, many of whom have been scarred by losing one or both parents, by homes sometimes devoid of affection or personal respect, or by scenes of violence among their parents.

The Ravenswood Center has created an environment of work and play designed to channel the children's aggressions into constructive behavior. And there are many aggressions in this group, 90 percent of whom come from one-parent families. Mr. Swenson has developed an arrangement of unusual equipment designed to give the youngsters sensory experiences. The lack of such experiences, caused by the children's deprived backgrounds, makes them potentially unmanageable and headed for future social alienation.

The program is based on two assumptions. First, children with a rich enough diet of sensory experiences will adjust their intake of activities to meet their needs for growth and development. This consumer approach to education is balanced with the second assumption that children are bound to the present and need adult assistance to abstract for them when they cannot abstract for themselves. The blending of these assumptions is seen in the flow of the playground and in the self-contained play areas within the classroom. Teacher-structured activities allow the children freedom to move in and out of various areas as they complete their own projects. Many activities center around art, a medium for expression and articulation of the child's impulses and creative urges.

The Ravenswood Children's Center has few of the playthings associated with four and five-year-olds. A war surplus net is mounted on the frame of a large swing, providing a jungle gym that is safer yet more physically demanding than usual. In a corner of the yard lies a huge tree which was brought from nearby woodlands where it had become nonvital. A water trough permits boating and at times some mischievous splashing. In the center of the playground is a mound of one and a half tons of cement upon which the children can playfully scamper—a Matterhorn of abstract contours.

The Center, one of 250 in California, is financed through the State Department of Education under the Lanham Act.

Present enrollment is limited to fifty, and parents pay a fee proportional to their income. To avoid a racially and culturally homogeneous group, Mr. Swenson recruited youngsters from other areas, including children of Stanford graduate students.

While helping a four-year-old tack her pictures on a wall, Mr. Swenson explained that the youngsters' greatest problem is learning to play with each other. His staff, therefore, is chosen specifically from applicants evincing the empathy and desire to share emotionally with others, a quality the children lack.

When a little girl ran out the door and headed toward home after having her feelings hurt by a playmate, she was overtaken and carried back, still sobbing but with her arms tightly around the neck of the handsome young staff member. Lee Swenson and his staff shelter, feed, and teach their youngsters within an environment conducive to emotional growth for less than one-fourth the cost of comparable projects. In an era of Great Society programs, this must be a unique financial structure. But the staff would probably think of the little girl's arms around the counselor's neck as their idea of a unique contribution to child development.

THE INDUSTRIAL ARTS CENTER COMPLEX

Three iconoclastic members of the Jefferson Union High School District Industrial Arts Department, Gerald R. Maxwell, Norman O. Sanden, and Leslie J. Vogt, are determined that the Industrial Arts Center Complex of the new Serra-Monte High School (opening in 1968) will house one of the nation's most advanced assemblies of industrial equipment for training high school students. They have devised a curriculum that promises to develop students who can step into industry with skills that will not be outdated by even the most rapid changes in industrial technology. The curriculum will incorporate the skills of virtually every other department in the high school into industrial arts projects.

The Industrial Arts Complex centers around a circular building with a 140-foot diameter. The emphasis within will be on the ability to transform any segment of the total area to simulate realistic industrial situations. This will require placing most equipment on pallets that can easily be arranged by electric forklifts in any desired combination or pattern. A concomitant of the principle of movability is temporary partitions.

Time formerly spent in woodworking class on a bookcase or in metals class on an ashtray will now be directed toward complex problems in testing materials, production organization, and devising implements to handle unorthodox situations. The new emphasis will be on skills rather than on completing projects in segregated areas. Heavy emphasis will be made on such problem areas as design analysis, supply and demand marketing situations, and corporate structure. Because rapid industrial change promises to place the highest premium on the innovator rather than on the imitator, the students will be encouraged to ignore traditional solutions.

The domed building is divided into two areas. The production area features a fabrication center where any type of material can be used. It has a machine center for shaping wood, metals, plastics, and ceramics, and a power center for studying electrical, mechanical, vacuum, hydraulic, and atomic methods of power transmittal. A material tool center will store tools that can be rolled to any area.

The planning area contains the Tests and Communications Center and the Study and Research Center and permits lecture demonstrations over live, closed-circuit T.V. There will also be facilities for photography and offset printing.

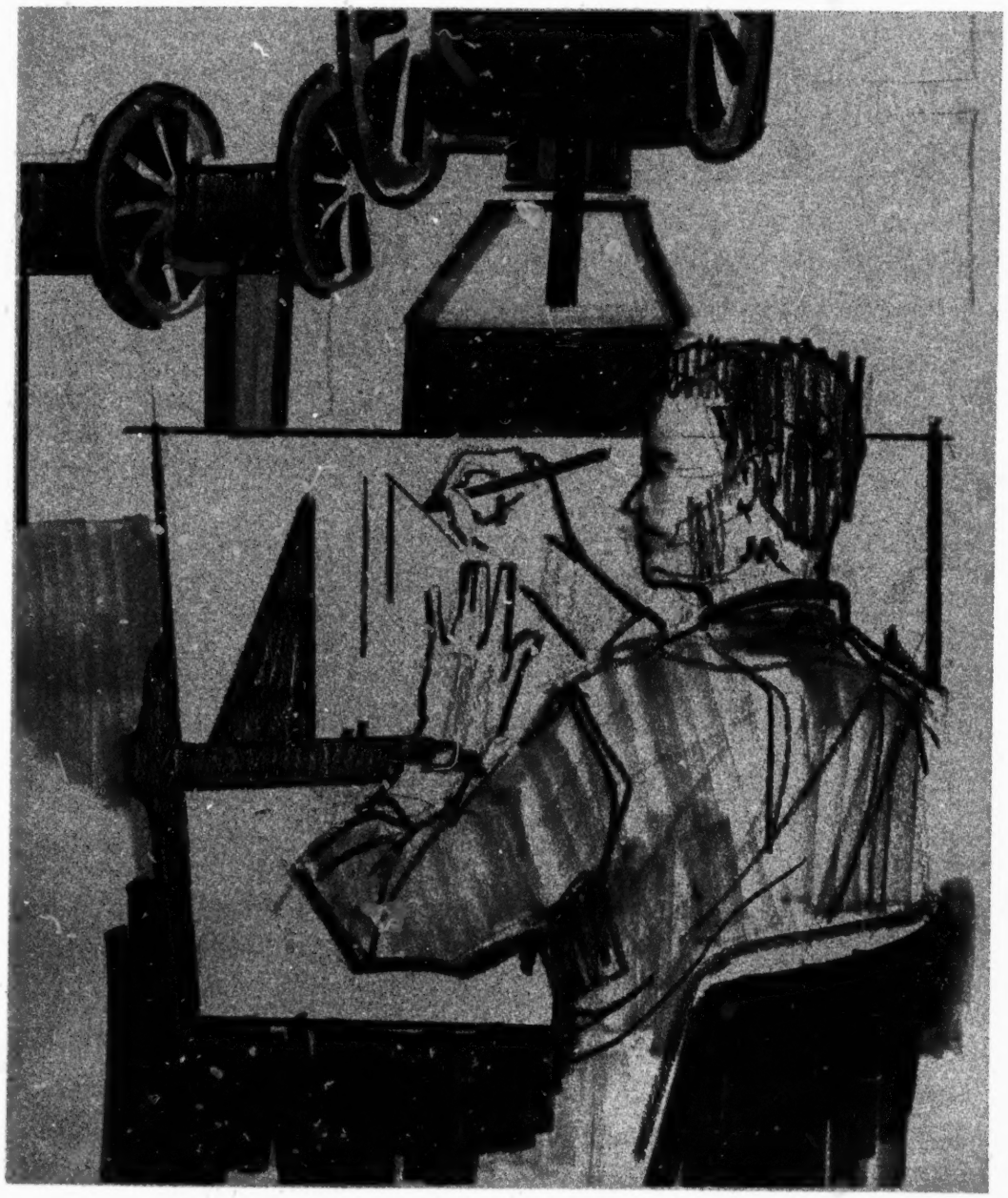
Programming will use flexible scheduling to provide the student a realistic time segment to complete his industrially realistic assignments. Jerry Maxwell hopes to maintain the concept of Corporate Structure which he has successfully introduced into the District. Corporate Structure involves students in the operation and management of a business complex and gives a broad insight into all segments of industrial society. Students assume responsibilities in personnel management, market analysis, production, accounting, technical writ-

ing, advertising, and safety engineering.

The industrial arts curriculum has necessitated integration with other departments. A merchandising class is constructed to do the market analysis, advertising, and sales of a product that the shop will manufacture. Students from an accounting class "keep the books." An advanced typing class prints the company newspaper. Writing technical reports involves the English Department. Mr. Maxwell's classes have actually gone on strike in protest against profit sharing arrangements and returned to their project only after a full exposure to the intricacies of Taft-Hartley and collective bargaining.

Messrs. Sanden, Vogt, and Maxwell have long realized the basic weaknesses of traditional industrial arts programming. A 1959 issue of SCHOOL SHOP *outlined some methods for encouraging the student "to become highly motivated by the use of his own imagination, to learn to think and plan in a problem-solving situation, and to become aware of the technical processes which he is exposed to in everyday life." Some of the most recent planning which will be implemented in Serra-Monte High School was aided by PACE funds.*

Many school systems feel that getting industrial arts "out of the basement" is a significant measure of change, but these three innovators are determined to make industrial arts synonymous with education's response to the demands of a changing society.



THRESHOLD TO MUSIC

A new concept in teaching music has been successfully developed by Mary Helen Richards at the Portola Valley Elementary School using normal classroom facilities and local funds. The origin of Mrs. Richards' system came from her visit to the schools of Hungary, which use the methods of the renowned musician, Zoltan Kodaly.

When she brought the Kodaly method back to Portola Valley, Mrs. Richards discovered that, in addition to its more obvious values to the student and to the musician, the Kodaly method offered advantages to classroom teachers, even to those without musical backgrounds. Because of the method's de-emphasis of some of the more technical musical symbols, teachers have found it easier to instruct primary grade children. The success of Mrs. Richards' teaching was demonstrated at the Kodaly Institute held this summer at Stanford under the direction of Mrs. Richards and Maestro Kodaly.

Kodaly decided on a five tone scale for his Hungarian students since he felt that the seven tone scale was both difficult and aesthetically inhibiting for children. Mrs. Richards originally feared that the music common in the American classroom would not be amenable to conversion to the five tone scale, but was pleasantly surprised to discover that many American pieces, especially pioneer, mountaineer, and spiritual melodies, were pentatonic.

Mrs. Richards stresses that the pupils acknowledge the intervals between the symbols as well as the rhythmic symbols themselves. She warns against moving too soon into complicated musical signs and notations; it is better that the student concentrate on feeling *and* hearing *the music until he develops an ability to* feel *and* see *the notation, the symbols that represent the music. Professor Kodaly has written that one must " . . . see what one hears and hear what one sees." The process is to hear, feel, and read the music; the goal is to react to music with a range of associations as varied as those derived from the printed page. The response to the music should become instinctive.*

Mrs. Richards has developed experience charts to aid the classroom teacher. "Familiarity with the terms 'beat,' 'rhythmic pattern,' and 'phrase' is established before the child is much beyond the very beginning of his musical training. When he is able to recognize the beat, the rhythmic pattern, and phrasing in music that he hears, *he is ready to recognize the beat, rhythmic pattern, and phrasing in music that he* sees. *It is at this point the experience charts are introduced."*

The charts are organized to create student interest in the basic procedures in determining the rate of advancing,

usually through enlargement on earlier ideas. Yet, care is taken to avoid any possibility of excessive drill which, Mrs. Richards believes, would smother the child's natural capacity to enjoy music. Typically, the student should progress through the diatonic scale by the end of the third year and then become ready for recorders and stringed instruments.

The success of the method depends upon adequately indoctrinated teachers. Professor Kodaly has said: "It is much more important who the singing teacher is—than who is the director of the Opera House, for a poor director can be identified as a failure at once—but a poor teacher can exterminate the love of music for thirty years in thirty successive classes."

The need to remove some of the barriers which separate young students from the humanizing influence of good music is based on something more than the desire to preserve music as part of our heritage. Mrs. Richards' program is integral to the total curriculum and to the growth of future adults, for,

"The man that hath no music in himself,
Nor is not moved with concord of sweet sounds,
Is fit for treason, strategems, and spoils."

(Shakespeare)

O.I.C.W.
OPPORTUNITIES INDUSTRIALIZATION CENTER WEST

"We help ourselves" is the motto of Opportunities Industrialization Center West in Menlo Park, a dynamic young organization that is determined to give educational opportunities to those adults of the Peninsula who were denied these opportunities earlier or whose training is unsuitable for today's industry. A tour of the facilities at 1100 O'Brien Drive, Menlo Park, with O.I.C.W.'s operation manager, Jesse Mitchell, is convincing that the students are indeed helping themselves.

Father John J. Sweeny of St. Francis Assisi parish started the project along with Pat Manning of the Philco Company. Mr. Manning had read of the success of the original O.I.C. Project in Philadelphia under Dr. Leon Sullivan, a Protestant minister. Father Sweeny states the purpose of O.I.C.W. as being "to organize and recruit the Peninsula community to work together to give equal opportunity for economic and social development to those who never had it . . . The benefit to the community will derive not only to the minority who receive training but also to the majority who will grow in tolerance and unity in proportion as they participate in its establishment."

Although the problem may stem from prejudice against minority groups, something more than the evolution of social enlightenment in the richer society is needed to correct it. Other community and governmental programs for the unskilled adult have been limited in their effectiveness because they have attracted only those who were self-assured enough to handle the initial barriers to employment. O.I.C.W. directs itself to those who have had little hope of utilizing their potential and, therefore, have had little motivation. First, it recruits its students and then sustains their motivations while training them in the technical skills required for employment. This is O.I.C.W.'s formula for breaking the vicious circle in which the unemployed, unskilled adult loses his self-respect and the confidence necessary to find a way to get the skills demanded by industry. The O.I.C.W. formula is working.

Applicants are interviewed and then given an individualized program determined by their prior development in a variety of areas. All who are sincere in their attempts to better themselves are accepted. The student is first exposed to a feeder program designed to develop his awareness of the importance of personal appearance, effectiveness in interviews, and requirements of application forms. Then the student is channeled into the specific courses which lead to mastery of keypunch operation, drafting, electronic assembly, stenography, and office work. An expansion of this curriculum will include automotive mechanics and metal shop work. A pupil can complete the two-part curriculum as quickly as his abilities, previous training, and drive permit him. The structure is centered

completely on the needs of the student rather than a rigid curriculum.

O.I.C.W. is located in facilities donated by the Kavanaugh Industrial Park. It has received assistance, either in the form of organizational assistance, course instruction, money, or equipment, from major companies in the area such as Western Electric, Sylvania, General Electric, Lockheed, Hewlett-Packard, Philco, Electrochimica, and Union Carbide. In addition to Mr. Mitchell, O.I.C.W. has a staff of 35. A major expansion program in the coming year is awaiting a commitment by the Federal Government of over a half million dollars.

Two hundred and fifty students now attend either day or evening classes. Over 215 trainees have been placed in industry, and this number is increasing at the rate of 25 each month. One of O.I.C.W.'s graduates took her skills to Lockheed where she improved on them to the point that she has been invited back to join the O.I.C.W. staff. She is now teaching new students. "I am so happy to have the chance to help others, as I have been helped." Opportunities Industrialization Center West needs no further definition than this statement by one of its first graduates. Perhaps its motto will have to be changed eventually from "we help ourselves" to "we help each other."

PACE I.D.* CENTER PROJECT

Estimates of the number of emotionally disturbed children in our schools range from ten to twenty percent. The effects of this problem are well documented and can be seen in the crime rate and in the vast number of people being treated in the Nation's mental institutions. It is obvious that the cost to society and to the individual is enormous. Years of productive, useful living are lost.

There is a substantial body of research evidence that points to the feasibility of early identification and treatment of behavior problem children on a systematic, controlled basis. The basic concept of the PACE I.D. Center Project is that of a cooperative program of early intervention to reduce or prevent disordered behavior which could otherwise serve as an obstacle to learning. Among the project's aims are: 1. To identify behavior problem children early. 2. To provide appropriate intervention within the school-family-community environment. 3. To demonstrate the progress of the project through ongoing evaluation. 4. To make the results available so that they may become one more step for adequate preventive mental health.

At present, there is no systematic effort in the schools to apply preventive measures to this problem. Emotional disturbance characteristically is identified when anti-social behavior makes it obvious. In many instances, emotional disturbance is not identified until it has reached an advanced stage.

The children who will be included in the PACE I.D. Center Project are known as PACERS. PACERS are identified by the classroom teacher who makes use of the A-M-L Behavior Rating Scale[1] in assessing the behavior and learning of the children in the classroom. PACERS are the high scoring group whose behavior is of concern to the teacher as well as those children who are experiencing some degree of difficulty in learning.

The classrooms included in the initial screening of children in kindergarten through fourth grade were from eleven elementary schools in the South San Francisco Unified School District, two in the Bayshore Elementary School District, two in the Brisbane Elementary School District, three Roman Catholic schools, and one Lutheran school located in South San Francisco. A minimum of one hundred children, or families, will be included in this demonstration project. Direct services will be offered by the PACE I.D. Center staff, headed by Dr. Phyllis Van Vleet, to PACERS and their families, where indicated. This intervention with families will take place only after staff social workers have become familiar with the school environment. A close relationship will be maintained between the staff social worker and all school personnel, especially the PACER's principal and his teacher.

Evaluation of the three-year project will be of great importance in determining the effectiveness of this school-home-community program. In order that the evaluation may be more reliable, every PACER has a counterpart; a child identified in the same manner as the PACER and matched on a number of criteria. These children serve as controls and

are not identified to staff workers or to school personnel. For these children there will be no intervention with the child, with school personnel, or with the family.

A Professional Coordinating Committee made up of representatives of those social agencies that have a service or liaison relationship with children and families served in the geographical area prescribed by the PACE I.D. Center will meet several times a year. These meetings will keep agencies informed of the progress of the PACE I.D. Center, provide the opportunity for agency representatives to share in the discussion of the program, and stimulate ideas and innovative techniques to implement the concept of continuity of service to children and their families.

The PACE I.D. Center is the essential next step in bringing social adjustment agencies and schools to address themselves to the joint task of identifying deviant child behavior, demonstrating early intervention techniques, and evaluating the results.

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[1] Beisser, Paul T. and Van Vleet, Phyllis. EARLY IDENTIFICATION OF BEHAVIOR PROBLEM CHILDREN AND MULTI-PROBLEM FAMILIES. Rosenberg Foundation Grant. Office of San Mateo County Superintendent of Schools, Redwood City, California. January 1962.

*EARLY IDENTIFICATION OF AND EARLY INTERVENTION WITH BEHAVIOR PROBLEM CHILDREN AND THEIR FAMILIES.

UPWARD BOUND

Stanford University is one of 202 institutions operating summer Upward Bound programs under sponsorship of the Office of Economic Opportunity. However, Stanford's program had its genesis before Federal funding. Last year a similar but smaller program was successfully conducted by two graduate students, Elaine Reuben and Igor Webb.

Upward Bound is designed for students who, because of social and economic disadvantages, have de-emphasized their own potential for education beyond high school. The purpose of Upward Bound is to give students the stimulation, confidence, and help they need to pursue education to the extent of their individual abilities and talents. Each project combines academic with extra-curricular activities and provides for follow-up during the ensuing school year. Through continued student involvement, Upward Bound hopes to make a lasting impact on students' attitudes and to introduce new worlds that education can lead them into.

The students, who are from East Palo Alto and East Menlo Park, must take English, reading, social studies, and mathematics. They elect among fine arts, drama, or work on the newsletter. While tutoring is provided for students needing help in basics, the main emphasis in classwork is to expand rather than to duplicate high school instruction. All classes are small and informal, and the young teachers spend much time with students outside classroom hours.

Student interests are expanded through special events such as a field trip under the direction of the biology department to observe tide pools, a visit to Stanford Research Institute's sonic experiments with seals, three plays at Stanford Summer Festival, and a series of evening talks by community leaders.

The follow-up program will function largely in cooperation with the Ravenswood Tutorial Project now in operation at Stanford. Each student will be assigned a Stanford tutor who will meet with him weekly. There will be a pool of specialist tutors for those who need help in a particular subject. The one-to-one relationship between tutor and student transcends the limitations of classroom instruction and enables the tutor to act as an older brother or sister. Tutors are selected with this dual function in mind.

After high school graduation, students can enter a four-year college or a junior college from which they may later transfer to a four-year school. Professor Lawrence Ryan, director of the program, and Mrs. Charlotte Irvine, associate director, and their staff will assist the students in applying to institutions and will alert the students to the availability of scholarships and the facilities of the Stanford Counseling and Testing Center.

A visitor to Upward Bound observed:

"A few minutes before ten o'clock the students assembled

in a pleasant, seminar-type room in the fraternity house. They had asked if they could meet there instead of a more formal classroom. As they found seats, they talked informally to each other and the instructor. During the first half hour other students entered the room and joined in the discussion without fanfare or self-consciousness.

"Later my guide took me by the Student Union where Upward Bound students often go for recreation, paying with their weekly allowance money. Then we returned to 'camp' where students were forming a lunch line by an indoor-outdoor cafeteria. As we picnicked, we were joined by Professor Ryan. The students reacted to his presence as warmly and casually as they did to each other. They had come from underdeveloped communities to the campus of a leading university and had learned to be 'at home' in their new world. Judging from the absence of any student hostility toward or rejection of their teachers and from quiet interest they showed in all aspects of their new environment, it was safe to assume that some of the impediments of learning were indeed being removed."

Professor Ryan's hope is that Upward Bound will pick up the student when he is building impediments to higher education, give him an appetite for learning, and, most important, instill a conviction that he can secure the education he wants.

PROJECT DISCOVERY

Project Discovery is a unique alliance of industry, higher education, and local school districts. Cooperating are the Bell and Howell Company, manufacturers of audio-visual equipment; Encyclopaedia Britannica Films, producers of audio-visual materials; Ohio State University, Bureau of Educational Research; and four participating schools: the Mercer Elementary in Shaker Heights, Ohio; the Scott-Montgomery Elementary in Washington, D.C.; the Terrell Independent School District in Terrell, Texas; and the Thomas Edison Elementary in Daly City, California.

The project at the Thomas Edison Elementary School, directed by Principal John Belforte, is designed to test the effect of maximum accessibility and availability of instructional materials on curriculum, pupil attitudes, achievement, creativity, motivation, and teaching methods and techniques. For a three-year period, the entire film and filmstrip library of Encyclopaedia Britannica Films, 500 16mm films and over 1,000 filmstrips, plus new materials as they are released, has been placed in each of the participating schools. Bell and Howell has placed in each classroom a self-threading 16mm projector and an autoload filmstrip projector cart and permanently installed screen. The school district has expanded the school library and provided a full-time, credentialed librarian. A resident research methodologist has been added to the staff and will observe and test behavioral and educational changes. Thus, two important steps have been taken:

1. *A school has been totally saturated with audio-visual materials and equipment.*
2. *The effects of this saturation are being closely studied.*

The unique characteristics of the library is the concept of complete integration of the materials it houses—books, films, filmstrips, art prints, and recordings. Uniform classifications and subject headings apply to all media. Color banded cards identify each type in the card catalog. Books, films, and filmstrips are physically housed on the same shelves and in the same cases. The library houses all school curriculum materials and is accessible to all children and teachers. Parent volunteers

handle circulation routines and housekeeping details. The librarian functions as a consultant and, as such, has become the catalyst or transfer agent of ideas, methods, and techniques. All library materials, including films, filmstrips, and projectors, are available for home circulation, and children check these out themselves. Library use is generally unscheduled; individual children and small groups use materials as classroom activities require.

Although a careful analysis of Project Discovery is yet to come, teachers cautiously point to positive signs, such as a noticeable growth in language development. How accurate this perception is and whether this apparent growth is actually the result of the better research facilities, the broader scope in research materials, and the opportunity to delve in depth in any subject area will be watched carefully by the research methodologist. Educators throughout the Nation will also be watching for results of Project Discovery to see if the multimedia approach to learning supported by the school community provides an atmosphere in which children are psychologically secure and able to probe, explore, and risk.

THE KNOW AND CARE CENTER

The goal of the Know and Care team is to assist one school district initially to develop a zero-reject concept of education: by using the multitude of resources available within the community, by assessing the magnitude of human potential within each student, by developing a program of quality assurance for educational standards, and, finally, by developing unique instructional programs which reflect the first three variables. The Center will assist in developing a truly comprehensive school district, one which provides for all students.

Sponsored by the San Mateo Union High School District, the Know and Care Center is under the aegis of the San Mateo County PACE Program. To perform its functions, Know and Care has an eleven-man staff headed by Director George F. Outland. Each staff member is charged with developing and maintaining contacts with numerous community resource people so that constant dialogue may occur with labor leaders, minority groups, government agencies, civic organizations, and individuals concerned with education.

In attempting to assess human potential, the staff wants to answer many questions concerning the significance of data contained in present cumulative student records, the need for unavailable information, the use of ideal data, behavioral goals expressed by teachers, and teacher strategy in building upon the potential of each child or adult.

By searching for quality assurance, Know and Care hopes to find other answers in education. "Could not all teachers identify educational goals in terms of identifiable student behavior?" "Why should half the students who enter college from the preparatory program fail to complete a degree?" "Why should youth unemployment be three times that of adults, and even greater among minority groups?"

Examples of programs using available resources and established with assistance of Know and Care are:

1. *An aerospace technology program developed with assistance from a junior college and from airline companies.*
2. *A reading laboratory to be opened to private and public school students and adults, which presently screens all incoming freshmen for quality standards and diagnoses remedial action among the 400 dysfunctions which might be at fault.*
3. *A physical fitness laboratory as part of the human potentials program.*
4. *An evening study/tutor/ homework center for all where, for example, adult students in programs of English as a foreign language are helping high school foreign language students, and vice versa.*
5. *Auto services training for less capable students.*
6. *An alterations specialist program which enrolls students from three high schools in the comprehensive district.*

7. *A mathematics laboratory for the student who does not visualize abstractions as readily as concrete mathematical examples.*
8. *An interdisciplinary approach to reading and mathematical problems for less capable students using an industrial arts laboratory as a vehicle for applied experiences.*
9. *A community sponsor program which has already salvaged one bright youngster about to drop out due to a family tragedy, which has found a tutor for a high school graduate who could neither read nor write at a functional level, which has placed physically and mentally handicapped students in work experience stations.*

The Know and Care concept of education provides resources so that youngsters may be considered on their strengths and, while being held to high standards, may proceed through a variety of educational paths to a high school diploma or further. Federal support of the program will proceed at a diminishing rate for three years, at which time most of the concepts of Know and Care will be transferrable. The developmental phase will be complete and the operational phase taken over by the district or other agencies.

The Center is proving to be a place where someone "knows *enough to understand the problem, and* cares *enough to find the answer.*"

MONTESSORI PRESCHOOL PROGRAM COLLEGE OF NOTRE DAME BELMONT

The College of Notre Dame in Belmont, with assistance from Federal programs and private organizations, is meeting the educational and social needs of the lower income areas of East Palo Alto and Mountain View by opening a new Montessori school in East Palo Alto. Within the renowned Montessori method, two basic principles are being followed: adapting the program of instruction to meet individual needs of children, and encouraging a maximum of community involvement in the program.

Summer Head Start programs, which were the initial stages of a long-range plan and were funded jointly by College of Notre Dame and the Office of Economic Opportunity, have been run successfully for two summers. These programs provided the building blocks of community goodwill and involvement and a trained nucleus of non-professional staff personnel. Construction is underway in East Palo Alto for a four-classroom building to open in December 1966. Plans call for a kindergarten and an ungraded primary in addition to the preschool program. Four additional classrooms will be built as funds become available. A Mountain View preschool program is planned for the near future.

Efforts to use the resources and enthusiasm of parents of the Belmont school children have developed an awareness in this group of the needs of the less affluent. The Catholic Social Service and the Guadalupe Society have raised funds to buy educational and recreational equipment for the new schools, and the Guadalupe Society has begun classes to teach English to Spanish-speaking parents. All parents are invited to observe classes and to consult frequently with the teachers to gain a better understanding of the children and their educational needs.

When Maria Montessori put into practice her education theories over fifty years ago, her views of discipline, sensory training, and the teaching of reading, writing, and arithmetic during the preschool years were revolutionary. While remaining controversial, many Montessori ideas and much of the equipment have unobtrusively moved into general educational practice. Within this theory that originated in the slums of Rome, there is a realization of the necessity for a special kind of education to attack the underlying causes of poverty and social problems.

According to the Montessori method, to be truly free the child must learn those skills that enable him to be independent. Therefore, emphasis is placed upon dealing competently with one's own environment. The program plunges the young learner into greater awareness and sensitivity of himself and his environment. Since Madame Montessori believed in deliberate sensory training, planned exercises and equipment make tactile, thermic, baric, and muscular senses more acute. Equipment is designed to provoke the child's curiosity and train his senses and intelligence. Materials are self corrective; they provide concrete evidence of error which the child himself can

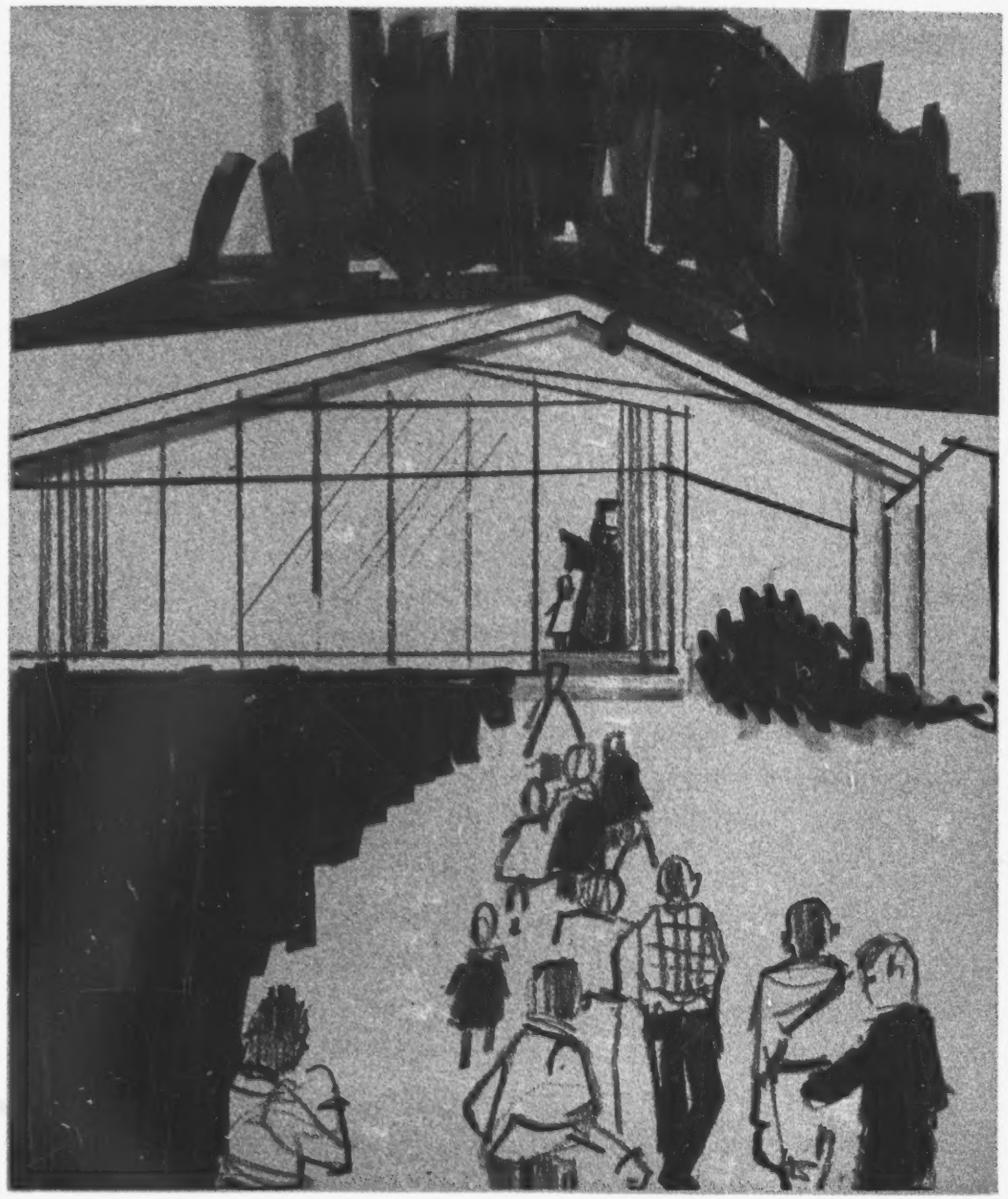
recognize. Social needs and creative outlets are met through playgrounds, group activities, tea parties, painting, and other art work.

Order and gradual development are important elements of both material and method. Since individual needs are met through careful understanding by the teacher of each child's readiness level, a one-to-ten teacher to child ratio is necessary. In the Belmont program there are thirty children and three teachers in both the morning and afternoon sessions. In the newer programs, the director, Sister Christina Marie, is adding teaching assistants for Montessori Head Start programs so the child's progress can be monitored and materials made immediately available as he is ready for them.

The three schools are religiously and ethnically integrated, and each aims to:

1. *Induce the small child to become a lover of intellectual work.*
2. *Encourage an active self-discipline.*
3. *Deal with each child individually.*
4. *Respect the whole personality of the child.*

Through its expanding programs the Notre Dame Montessori program has brought a fifty-year-old theory of preschool education for the disadvantaged up to date and placed it in the front line of educators' responses to the needs of contemporary society.



COMPUTER-ASSISTED INSTRUCTION

Professors Patrick Suppes and Richard C. Atkinson of Stanford University have evolved a concept of teaching basic skills in reading and mathematics by means of electronic computers. In order to test the concept, the cooperation of a progressive school system was needed. Principal William Rybensky and the Brentwood School of the Ravenswood City School District accepted the challenge. Stanford University, under a contract with the United States Office of Education, has established this experimental laboratory on the Brentwood School site.

This is the first year that Brentwood will be using computer-assisted instruction. Children from four first-year classes will spend one-half hour per day learning reading or mathematics skills in a specially designed building housing the CAI instructional equipment.

The Stanford-Brentwood Computer-Assisted Instruction (CAI) Laboratory will make it possible for sixteen students at a time to follow completely individualized programs. Each child will proceed at his own pace along a program the computer selects. The complex potential of CAI has been made possible by the curriculum specialists' taking into account every display and auditory message the student should receive as well as the type of responses the student may make. Students can approach the curriculum with a degree of freedom impossible in traditional classes. The advanced student is presented only those materials that contribute to his advancement, and the slower student is given review in areas he has not yet mastered.

The directors of CAI see the Brentwood project as offering opportunities for experiments with curriculum without the presence of extraneous variables that have made evaluations of previous classroom experiments too questionable. The ability to monitor each child's step by step confrontation with the learning situation and to alter continuously the parameters of that situation permits a degree of control never before possible.

Student terminals designed by International Business Machines consist of a picture projector, a cathode ray tube (C.R.T.), a light-pen associated with the C.R.T., a modified typewriter keyboard, and an audio system which can record and play prerecorded messages.

Professor Suppes sees four major aspects of computer-assisted instruction that are of value across the entire educational spectrum. The first is in the area of the individual differences in student abilities, differences in rate of working, accuracy, and understanding. Although schools acknowledge the existence of individual differences and include their recognition

as part of their educational philosophies, the actual abilities of the schools to take them into account is severely limited in the normal classroom. Computer technology provides hope for accumulation of individual differences in subject matter learning.

Another advantage of CAI is assessment of student performance. It gives the teacher an immediate synopsis of each student's work and permits the teacher to present to the class more individualized instruction based on specific learning problems and abilities. The computer assesses the total student performance on its curriculum materials and provides classroom teachers with this information.

By teaching basic skills which were formerly routine chores, the computer frees the teacher to deal in more difficult, advanced problem areas which the student can master only with teacher assistance.

The final potential of CAI lies in the opportunity it affords to amass enough data under controlled circumstances to enable new probes into the psychology of learning, an area in which little analysis has been possible heretofore.

The CAI directors are optimistic as a result of their feasibility studies over the past years and see CAI as a serious contribution to educational knowledge of the future.

SELF ENHANCING EDUCATION

Educators have long realized that the condition of a student as he enters the classroom is one of the strongest determinants of his ability to profit from the activities within the class. The difficulty of identifying pre-classroom influences has produced a sense of futility in many school systems. A new program, using PACE funds, in the Menlo Park City and Cupertino Union Elementary School Districts is not only defining some determinants of classroom performance but is initiating a multi-faceted program to attempt to eradicate one of the most significant emotional blocks to optimum classroom performance—the student's low self-esteem.

Self Enhancing Education is the culmination of an eight-year comprehensive and detailed analysis of the children, teachers, and parents in the two school districts. It was determined that children often get the feeling that adults are interested only in their mistakes. They develop a fear of the autocratic adult whose judgment makes them feel inferior or inadequate. To allay this fear, they work for adult approval, and their mistakes produce feelings of failure. SEE promotes techniques which enable the child to learn from his mistakes and to work toward self-approval and self-improvement.

Self Enhancing Education is a process in which the interactions of the student with his teachers and his parents help him to feel strong and worthy as a person. It leads the student to higher scholastic and personal achievement by getting him overtly involved in solving his own problems. This is in contrast to the more typical classroom focus on learning by precept and admonition.

SEE directors schedule workshops for teachers and all school system employees who might have any interaction with the children. One school in each district prepares its staff through an intensive week of study during the summer. Three days are devoted to Group Dynamics, one day to training in Parent Effectiveness, one day in SEE procedures, and one day in Physical Activities conducive to development of better self-image by the child.

An even more unusual aspect of SEE is a series of evening meetings for parents in which the focus is initially upon heightening the self-awareness of the parents, thereby inducing family situations which serve to reinforce the school's environment of increasing student self-esteem. Parents participating in summer "Parent Effectiveness" discussions under the supervision of Dr. Thomas Gordon are expected to form the nucleus of continuing adult panels in the school year. SEE's goal is to encourage parents and teachers to act as models of communication rather than autocrats when dealing with children. The program sees a strong connection between contemporary adult syndromes of insecurity and children's behavior in the classroom.

Because of the complexity of focus in such a program and because of the subtleties that always attend human interactions, SEE's techniques are constantly subjected to analysis and reinforcement. Mrs. Norma Randolph, director, and William A. Howe, assistant director, hope to define the elements of the program so that any school can utilize their format. They believe that its values are accessible to all students, regardless of personal or environmental factors.

The Cupertino Union Elementary District has awarded top priority to the development of the SEE program because it realizes that an effective school-wide program of student self-enhancement has not existed heretofore. The extent of the District's commitment is indicated by use of a set of primary goals which are expected to ensue from a District course and from use of a teacher's handbook, Self Enhancing Education: Processes that Enhance, by Mrs. Norma Randolph of the Cupertino Union Elementary School District and William A. Howe of the Menlo Park City School District.

SEE is more than a useful summary of "self enhancement education." It is an appropriate symbol for the willingness of the Cupertino Union and Menlo Park City School Districts to look into the triad of interrelationships between the child, the parent, and the school, and to look determinedly for methods that can make the interactions more productive for the child.

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